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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/608,196

Applicant(s)

YOSHIDA ET AL.

Examiner

DHIRU R. PATEL

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/27/07 196
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the wiring member includes a plurality of grooves recited in claim 15. The examiner suggests showing reference number for a plurality of grooves. No new matter should be entered. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Note: It is noted that a plurality of grooves are formed in the fixing portion 30 (see specification on page 14).

2. The drawings are objected to because in figure 1, **arrow pointed to element number 30 appears like groove** and in figure 2, **and arrow pointed to element number 30 appears like fixing portion**. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. Inventor should provide a drawing showing a second insulative sheet, disposed between **the wiring member 38** and the second wire group as claimed in claims 3- 4.

Claim Rejections – 35 USC § 112

4. Claims 1- 20 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 5-8,11, and 14-19 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

a) relationship between a wiring member and holds both of the first electric wires and the second electric wires is missing **for claim 1**.

b) relationship between a wiring member and the first wire group intersects the second wire group is missing **for claim 1**.

c) relationship between a wiring member and holds both of the first electric wires and the second electric wires is missing **for claim 4**.

5. Claim 1 - 20 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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126 In claim 1 lines 7-10, the limitation " a wiring member the first wire group intersects the second wire group " is confusing and unclear in light of the specification because the drawings do not show the claimed subject matter and **the specification disclosed that a generally rectangular wiring member 38 having wire fixing portions 30 for holding the first wires 6₁ and the second wires 6₂, see pages 8-9, and the claim 1 claimed only a wiring member and does not claimed generally rectangular wiring member.**

128 In claim 4 lines 7-8, the limitation " a wiring member the second electric wires " is confusing and unclear in light of the specification because the drawings do not show the claimed subject matter and **the specification disclosed that a generally rectangular wiring member 38 having wire fixing portions 30 for holding the first wires 6₁ and the second wires 6₂, see pages 8-9, and the claim 4 claimed only a wiring member and does not claimed generally rectangular wiring member. Please note that in claim 4, delete " . " at lines 8 and 10.**

In claim 8 lines 1-3, the limitation " the wiring member the second electric wires " is confusing and unclear in light of the specification because the drawings do not show the claimed subject matter. and **it is noted that a plurality of grooves are formed in the fixing portion 30 (see specification on page 14).**

In claim 14 line 2, the limitation " the wiring member holds the first electric wires and the second electric wires " is confusing and unclear in light of the specification because the drawings do not show the claimed subject matter. and **it is noted that a**

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plurality of grooves are formed in the fixing portion 30 (see specification on page 14).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action: A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2, 5, 7- 11 and 14 -20 as best understood, are rejected under 35 U.S.C. § 102(b) as being anticipated by Onizuka (6,390,830).

Onizuka discloses :

Regarding claim 1, a circuitry assembly, comprising: a plurality of first electric wires 16A – 16D, forming a first wire group (see fig 1, and entire columns 1-5); a plurality of second electric wires 17A-17E, intersecting the first electric wires (see fig 1 and entire columns 1-5), while forming a second wire group (see fig 1); a first insulative sheet 15 , disposed between the first wire group and the second wire group (see figs 1 and 4, and entire columns 1-5); and a wiring member 22, 23, which holds both of the first electric wires and the second electric wires (see figs 8A-8B and entire column 5), wherein said wiring member holds the first wire group in a first direction and the second wire group in a second direction which intersects the first direction such that the first wire group intersects the second wire group (see figs 1 and 4 and entire column 5).

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Regarding claim 2, wherein the first insulative sheet is formed with at least one opening located corresponding to at least one intersecting point 1-8 at which one of the first electric wires and one of the second electric wires are eclectically connected (see figs 1 and 4, entire abstract and entire columns 1-5).

Regarding claim 5, the first insulative sheet is provided as a flexible film (see figs 1, 4 ,d 6B and entire columns 1-5).

Regarding claim 7, wherein at least one of the first electric wires and the second electric wires is plated with tin (inherent properties of wires).

Regarding claims 8 and 14, claims 8 and 14 are included in this rejection as best understood.

Regarding claims 9 -10, a first terminal a to d and a second terminal A to E (see figs 3A-3D and entire columns 3-4 and claim 10 included in this rejection as best understood.

Regarding claim 11, see figs 1 and 4.

Regarding claims 15-19, considering the drawing objections, claims 15-19 are included in this rejection as best understood.

Regarding claim 20, see figs 1, 4 and entire columns 1-5.

7. Claims 1-2, 5, 7-8,11 and 15 -19 as best understood, are rejected under 35 U.S.C. § 102(b) as being anticipated by Hattori et al (6,290,509).

Hattori et al disclose :

Regarding claim 1, a circuitry assembly, comprising:

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a plurality of first electric wires 20c – 20d, forming a first wire group (see fig 6, and entire column 7 and column 8 lines 15-30); a plurality of second electric wires 22b and 22d intersecting the first electric wires (see fig 6 and entire column 7), while forming a second wire group (see fig 6); a first insulative sheet 21, disposed between the first wire group and the second wire group (see fig 7 and entire columns 5 and 7); and a wiring member 30, which holds both of the first electric wires and the second electric wires, wherein said wiring member holds the first wire group in a first direction and the second wire group in a second direction which intersects the first direction such that the first wire group intersects the second wire group (see figs 9A-9B).

Regarding claim 2, wherein the first insulative sheet is formed with at least one opening located corresponding to at least one intersecting point 27 at which one of the first electric wires and one of the second electric wires are eclectically connected (see fig 6 and column 7 lines 45-67).

Regarding claim 5, the first insulative sheet is provided as a flexible film (see entire columns 5 and 7).

Regarding claim 7, wherein at least one of the first electric wires and the second electric wires is plated with tin (inherent properties of wires and entire columns 1 and 8).

Regarding claim 8, wherein the wiring member is formed with a plurality of grooves 30a-30b, each partly holding one of the first electric wires or one of the second electric wires (grooves for inserting the wires, see fig 9B and column 8 lines 15-30).

Regarding claim 11, see fig 6.

Regarding claims 15-19, considering the drawing objections, claims 15-19 are included in this rejection as best understood.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103 (a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 3-4, 6 and 12-13 as best understood, are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Onizuka (6, 390,830).

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Onizuka discloses:

Regarding claim 3, Onizuka discloses all the features of the claimed invention as shown above, but fails to disclose a second insulative sheet, disposed between the wiring member and the second wire group. Please note that Onizuka disclosed that a first insulative sheet 15, disposed between the first wire group and the second wire group (see figs 1 and 4, and entire columns 1-5), and it is well known in the electrical art to use an insulative sheet between the first wire group and the second wire group with a plurality of grooves as evidenced by Onizuka and it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Regarding claim 4, a circuitry assembly, comprising: a plurality of first electric wires 16A – 16D, forming a first wire group (see fig 1, and entire columns 1-5); a plurality of second electric wires 17A-17E, intersecting the first electric wires (see fig 1 and entire columns 1-5), while forming a second wire group (see fig 1); a first insulative sheet 15, disposed between the first wire group and the second wire group (see figs 1 and 4, and entire columns 1-5); and a wiring member 22, 23, which holds both of the first electric wires and the second electric wires (see figs 8A-8B and entire column 5), but fails to disclose a second insulative sheet, disposed between the wiring member and the second wire group and please note that Onizuka teaches the use of an insulative sheet 15 with a plurality of grooves which respectively receive the electric wires 17A-17E and 16A-16D (see fig 1 and entire column 3). It is well known in the electrical art to use an insulative sheet between the first wire group and the second wire group with a

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plurality of grooves as evidence by Onizuka and it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Regarding claim 6, Onizuka discloses all the features of the claimed invention as shown above, but fails to disclose the first insulative sheet is comprised of either polyethylene terephthalate or polyethylene naphthalate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the assembly of Onizuka with the first insulative sheet is comprised of either polyethylene terephthalate or polyethylene naphthalate, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claims 12-13, a first terminal a to d and a second terminal A to E (see figs 3A-3D and entire columns 3-4 and claim 13 included in this rejection as best understood.

9. Claim 6 as best understood, is rejected under 35 U.S.C. § 103 (a) as being unpatentable over Hattori et al (6,290,509).

Hattori et al disclose:

Regarding claim 6, Hattori et al disclose all the features of the claimed invention as shown above, but fails to disclose the first insulative sheet is comprised of either polyethylene terephthalate or polyethylene naphthalate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the assembly of Hattori et al with the first insulative sheet is comprised of either polyethylene

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terephthalate or polyethylene naphthalate, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

10. Claim 3 as best understood, is rejected under 35 U.S.C. § 103 (a) as being unpatentable over Hattori et al (6,290,509) in view of Onizuka (6,390,830).

Hattori et al disclose:

Regarding claim 3, Hattori et al disclose all the features of the claimed invention as shown above, including several flat conductors arranged on an insulating sheet (see figs 7-8 and entire column 7), but fails to disclose further comprising a second insulative sheet, disposed between the wiring member and the second wire group. Onizuka teaches the use of an insulative sheet 15 with a plurality of grooves which respectively receive the electric wires 17A-17E and 16A-16D (see fig 1 and entire column 3). It is well known in the electrical art to use an insulative sheet between the first group wires and the second group wires with a plurality of grooves as evidenced by Onizuka and it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Response to Arguments

11. Applicant's arguments filed 6/27/07 have been fully considered but they are not persuasive. The applicant argues the following:

A) Fig. 1 shows a generally rectangular wiring member 38 that holds the first wire 6₁ in a first direction and the second wires 6₂ in the second direction. *108*

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With respect to argument A, the examiner respectfully traverses because claims 1 and 4 claimed only **a wiring member** and **a generally rectangular wiring member is not claimed in claim 1 or claim 4.**

B) As seen in FIG 7, the insulating film sits atop the bus bar 20d, but it is not underneath bus bars 22b and 22l and.

With respect to argument B, the examiner respectfully traverses because current rejection does not include bus bars 22b and 22l and fig 7 clearly shows that insulating film 21 between bus bars 22b and 20d and current rejection does not include 22l.

Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DHIRU R. PATEL whose telephone number is 571-272-1983. The examiner can normally be reached on M-TH, 6:30 TO 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-1984. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business

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Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Customer Service Representative or access to the automated information system, call

800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dhiru R Patel
DHIRU R PATEL
Primary Examiner
Art Unit 2831
9/21/07

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